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10/508749

DT04 Rec'd PCT/PTO 21 SEP 2004

WO 03/084131

PCT/GB03/01373

MDJ
6-30-05

A Communications System
This application is a 371 of PCT/GB03/01373 03/28/2003
This invention relates to a communications system.

More particularly, the invention relates to a communications system comprising:
a communications network comprising network nodes and network links between the
network nodes; and a network management system for allocating connections to said
network, said connections utilising network nodes and network links.

Requests for connections on the network are made over time to the network
management system. Each request may be accepted or rejected. If a request is accepted,
the connection is allocated to the network, and continues for a duration (which may or
may not be known at the time of the request). If accepted, a connection will require the
use of some of the resources of the network. In this regard, a network may be
considered a set of resources R. Typically, to a connection request there is associated a
set A of options, each option of the set being a way of carrying the connection, i.e. each
member 'a' of the set A of options is itself a set of network resources, and is a subset of
R. Each member 'a' of set A is capable of carrying the requested connection. The set A
of options will vary from request to request. One member 'a' of the set A is chosen at
the time that the connection begins to be carried by the network. Of course, it may well
be that some of the members of the set A of options are not available due to the
presence of other connections on the network. While a connection is using a set 'a' of
network resources, none of these resources may be used by other connections carried by
the network.

In an unreconfigurable network, i.e. a network where the connections are
unreconfigurable, the initial choice 'a' is fixed for the duration of the connection, and

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